

THURSDAY, FEBRUARY 28, 1884

## THE GERMAN CHOLERA COMMISSION

DR. KOCH, as chief of the German Cholera Commission, has just issued his fifth report. When we commented on his first report, which was transmitted from Alexandria on September 17, 1883, we drew special attention to the discovery by that expert of certain bacilli which were found to swarm in the discharges and coatings of the intestines of cholera patients, which were certainly not due to post-mortem changes, and which were absent from the intestines of bodies dead from diseases other than cholera. Dr. Koch believed that these bacilli, which much resembled those found in cases of glanders, stood in some special relation to the operation of cholera, but he was not prepared to say whether invasion of the bacteria was the primary cause of cholera, or whether it was merely an effect of the cholera infection. At that time the epidemic in Egypt had reached its decline, the period which of all others is the least satisfactory for etiological investigation; and hence, apart from some further record confirming the existence of the same bacilli in other cholera bodies which had since been examined, the reports which Dr. Koch has transmitted to his Government between his first one and the one now under consideration have not dealt with any scientific discovery. But since November last the Commission have pursued their investigations in India, the city of Calcutta having been decided on as the head-quarters of their mission of inquiry; and it is to the results there obtained that Dr. Koch's last report relates. In the meantime, however, Dr. Straus had reported on behalf of the French Commission, and had expressed his belief that the bacilli discovered by Dr. Koch did not bear the relation to cholera which the German Commission attributed to them; and that, unlike Dr. Koch, who had found nothing noteworthy in the blood of cholera patients, he had discovered in that fluid a definite micro-organism, which he believed he had succeeded in cultivating in the laboratory.

At this stage the subject is again taken up by Dr. Koch, who now gives an account of the further labours of his Commission. Under conditions of the most favourable sort, experiments have been renewed in Calcutta with an unbroken series of cholera patients and cholera bodies, and at the outset it is stated that microscopical examination has in all cases confirmed the existence, both in the choleraic discharges and in the cholera intestines, of the same bacilli as those which had been found in Egypt. And further, that which had not been possible in Alexandria, namely, the isolation and cultivation in pure media of these special bacilli, is stated to have been successful in Calcutta, with the result that they have been found to exhibit under cultivation certain characteristic peculiarities as to shape and mode of growth which enable the Commission to distinguish them with certainty from other bacilli. The Commission, too, have sought, as far as possible, to exclude sources of error, and hence they have subjected the bodies of patients dying from diseases other than cholera to careful micro-pathological examination, with the result that they are able to say that it has not been possible to find bacilli

similar to the cholera bacilli in any of the bodies of persons who had died of pneumonia, dysentery, phthisis, and kidney disease. Nor has it been possible to detect these bacilli in the intestinal contents of animals and in other substances commonly abounding with bacteria.

The inoculation of the lower animals with cholera discharges and other cholera material had, in Egypt, led only to negative results; and even if nothing further had been adduced as to this, we should in no way have regarded failure in this respect as invalidating any inferences that may be drawn by Dr. Koch and his fellow-workers as to the speciality of this bacillus, because it has been found impossible to transmit many of the specific infectious diseases of man to any other animal. We now learn, however, that several experiments made on animals have given results which allow of the hope of further success. Reviewing their more recent work, in this and other respects, the Commission are evidently hopeful of establishing an etiological relation between the bacilli in question and the cholera process, and this quite irrespective of success being attained in the reproduction of the disease in the lower animals. A telegram of more recent date than the report itself announces that Drs. Koch, Fischer, and Gaffky have discovered the same bacillus in a water-tank. If this be confirmed, it will be of value as proving that water, which, when polluted with excreta, has so often been alleged to be one of the principal means of conveying the cholera poison, is a medium favourable to the transmission of the "germ" from person to person, and the announcement comes aptly in connection with a report in which the German Commission announce that a diminution in the annual mortality from cholera in Calcutta from 10·1 per 1000 inhabitants before 1870, to 3 per 1000 since that date, is regarded by nearly all the physicians in that city as being solely due to the introduction of a water-supply of excellent quality.

Referring to the report of the French Commission, Dr. Koch declines to accept the conclusions of Dr. Straus as to the existence in the blood of organisms which are peculiar to cholera, and he expresses the belief that the alleged organisms are nothing but certain small, roundish blood-plates, which, not absent even in health, undergo a peculiar increase in the case of cholera patients, and which were referred to as far back as 1872 by Dr. D. Cunningham in his "Microscopical and Physiological Researches into the Nature of the Agents producing Cholera."

Whilst desiring to follow in the steps of Dr. Koch in observing an attitude of caution as to the meaning of the researches of the German Commission, we cannot but feel that the tendency of the reports as yet issued is favourable to the doctrine that cholera is associated with a specific organic contagion. A connection has already been established between specific disease on the one hand, and the staff-shaped bacilli of splenic fever, the spirillum of relapsing fever, and the microzymes of vaccinia and of sheep-pox on the other; and though it may still be doubtful whether these bodies should be regarded as actual generators of the diseases with which they are associated, or as mere carriers of infection, yet the advance which is being made is in the direction of the doctrine of the particulate nature of contagion. We may have to wait before there is sufficient evidence to warrant the application of this doc-

trine to the case of cholera, but we can congratulate Dr. Koch on the result of his labours so far, and at the same time trust that the example set us in this instance by the German nation may not be thrown away upon the people of this country, who, whilst having a higher interest than any other in ascertaining the real nature of cholera, allowed the opportunity of the Egyptian epidemic to pass by without attempting any scientific investigation as to its causes.

### SCHOPENHAUER

*The World as Will and Idea.* By Arthur Schopenhauer.

Translated from the German by R. B. Haldane, M.A., and J. Kemp, M.A. Vol. I. (London: Trübner and Co., 1883.)

AS the Kantian heaven works, philosophy shows less and less of an inclination to quit what Kant described as the fruitful bathos of experience. No doubt many a structure is still reared around us, "pinnacled dim in the intense inane," but that is simply because philosophy, more than any special department of knowledge, is exposed to the inroads of the uninstructed. But here, as elsewhere, the honest inquirer will find a consensus of competent opinion which estimates these piles at their true value. Serious workers pass by on the other side without controversy, lest perchance they should be as those on whom the tower of Siloam fell. On the other hand, only confusion of thought can lead people to identify philosophy with science, and to suppose that, when they have reckoned over the list of the sciences, they may erect a stone to the great god Terminus. For, though the matter of philosophy is the same as that of the sciences (and not, according to the current myth, a spider-like product of intestinal origin), yet the point of view from which the common material is regarded is *ab initio* different. Science, in its whole extent (including psychology), deals with the world of objects, whereas the first task of philosophy is to remind scientific men of the abstraction which they have been making—and for their own purposes rightly making—by showing them that the world of objects is unintelligible without a subject to which it is referred. Having rectified this fundamental abstraction, philosophy proceeds, as theory of knowledge, to a critical analysis of the conceptions on which, as ultimate presuppositions or working hypotheses, the different sciences are based. The notion of the atom and of infinite space may be mentioned as two of the earliest cases where such criticism is required. The result of such a criticism is to show that no science can say of its "facts" that they are absolutely true, because they cannot be stated except in terms of the conceptions or hypotheses which are assumed by the particular science. But conceptions such as those of space or atom are found to dissolve in self-contradiction when taken as a statement of the ultimate nature of the real. It follows, therefore, that they must be regarded as only a provisional or partial account of things. The account they give is one which may require to be superseded by—or rather, which inevitably merges itself in—a less abstract statement of the same facts. In the new statement, the same "facts" appear differently, because no longer separated from other aspects that belong to the full reality of the known world.

For the philosopher is essentially what Plato in a happy moment styled him, *συννοητικός*, the man who insists on seeing things together; and philosophy, in her office as critic of the sciences, aims at harmonising the notions on which they respectively rest, and thereby reaching a statement of the nature of the real which may claim to overcome the abstractness of the several provisional stages represented by the different sciences.

Judged by this standard, it is to be feared, Schopenhauer's philosophy will be found wanting. Its interest is undoubtedly, in the main, more literary than scientific; and in his central dogma of a metempirical or transphenomenal Will, Schopenhauer shows himself quite the traditional "metaphysician." Taken as literature, high praise must be awarded to the style of his productions, which is very different from that of his heavy-footed countrymen generally. Pessimism was lately much in fashion, and Buddhism is still highly esteemed. The philosophic father of these things is tolerably sure, therefore, of an interested audience; and "the general reader" will find rich pasture in the aphoristic wisdom of the man of the world, his keen and often cynical psychological analysis, and his genuine appreciation of art, especially of music, which was almost the one redeeming feature in an otherwise ignoble character. Mr. Haldane and Mr. Kemp have done their work so well, that those who are drawn to the book by the literary reputation of the original will not have their enjoyment marred by the intrusion of foreign idioms, clumsy constructions, and the general lameness of the translation style. All praise must also be given to the clearness and accuracy with which they have rendered the philosophical terminology of the work.

But the translators would probably hardly have undertaken the task, had they not believed that there was more of value in Schopenhauer than what has just been allowed him. And, in point of fact, it is perfectly possible to divide Schopenhauer's work into two parts. The world presents itself to him under the twofold aspect of "Will and Idea." "The world as Idea" is the phenomenal world, the world of science, while Will—one mighty unconscious desire or force—is the inner or noumenal reality of which the phenomenal world is the outward expression. I appear to others, and to myself, as an organised body—that is, as an object or complex of ideas; but I also know myself, Schopenhauer says, on the inner side as Will. He next denudes this Will of the characteristics which belong to it in the conscious life, ignoring at the same time the other features which, equally with Will, go to constitute that life, and then, with a superb sweep of anthropomorphism, declares that Will, as an impersonal force, is the essence of all phenomena—the steam that drives the world. In support of this thesis, he fastens on obscure facts like those of instinct; and, though he scouts at the "Bridgewater Treatises," he argues from teleology in an exactly similar sense. But as no scientific reader is likely to be led away by Schopenhauer's reasoning here, it is needless to enter into any formal refutation of his positions. It is more to the purpose to draw attention to the side of the book which, though not so distinctly Schopenhauerian, and probably not so attractive reading as the collection of brilliant analogies on which his system is built, contains an acute